

Claims Pending and Amended after Second Office Action

1 1. (presently amended) An expandable hoop support for a flexible  
2 tube having a nominal opening and a target site having an  
3 unsupported aperture with an aperture size, comprising:

4 a. a preformed hoop composed ~~of a coil~~ of material  
5 disposed to form ~~about~~ a first coil axis which first coil  
6 axis is disposed ~~to encircle a second axis~~ to form a  
7 second ~~double~~ coil having an outer diameter, and having  
8 memory retaining properties ~~to urge said material into~~  
9 ~~said double coil formed to match said flexible tube~~  
10 ~~nominal opening,~~ and having one of a rounded and a ball  
11 end; and

12 b. cylindrical delivery means for constraining said  
13 second coil in to a linear configuration wherein said  
14 deliver means and said coil are adapted for insertion  
15 into said flexible tube at a target site unsupported  
16 aperture size and said delivery means is then removed,  
17 said hoop will then reconfigure to said second ~~double~~  
18 coil configuration wherein said double coil outer  
19 diameter is configured to be larger than said target site  
20 unsupported aperture size and configured to urge said  
21 target site aperture to said flexible tube nominal  
22 opening.

1 2.(presently amended) The expandable hoop support of claim 1  
2 wherein said delivery means is a delivery tube arranged to fit  
3 within one of said first and said second coil.

1 3.(presently amended) The expandable hoop support of claim 1  
2 wherein said delivery means is a delivery tube arranged to fit over  
3 one of said first and said second coil.

1 4.(previously amended) The expandable hoop support of claim 1  
2 wherein said hoop comprises a stent.

1 5.(presently amended) A procedure for opening a coronary artery  
2 having a nominal opening size adjacent a target having at least a  
3 partial occlusion thereof, comprising the steps of:

4 a. determining an artery structure nominal opening size;

5 b. providing a preformed hoop composed of a primary coil  
6 of material having one of a rounded and a ball end  
7 disposed about a first axis, said first axis being  
8 disposed said primary coil being wound to encircle a  
9 second axis to form a secondary double coil having an  
10 outer diameter matching said nominal opening size, and  
11 instilling having memory retaining properties into said  
12 preformed hoop to urge said material into said double  
13 coil;

14 c. [[b.]] providing a cylindrical delivery means for  
15 constraining said secondary coil into a linear  
16 configuration;

17 d. [[c.]] inserting said hoop and said delivery means  
18 into an artery at said target site having an unsupported

19 aperture size less than said nominal opening size; and  
20 e. [[d.]] removing said delivery means whereby said hoop  
21 remains in said artery to support said artery in an open  
22 position wherein said secondary ~~double~~ coil outer  
23 diameter is larger than said target site unsupported  
24 aperture size and said ~~double~~ secondary coil ~~eein~~ is  
25 configured to urge said target site aperture to said  
26 nominal opening size.

1 6.(presently amended) The procedure of claim 5 wherein said deliver  
2 means is a rod arranged to fit within said primary coil.

1 7.(presently amended) The procedure of claim 5 wherein said  
2 delivery means is a delivery tube arranged to fit over said primary  
3 coil.

1 8.(previously amended) The procedure of claim 5 wherein said step  
2 of inserting comprises the step of inserting said delivery means  
3 into a coronary artery.

1 9.(presently amended) A vessel support system for support of at  
2 least a partial occlusion target site in a vessel having adjacent  
3 regions with a nominal opening size, comprising:

4 a preformed hoop comprising a wire wound in primary ~~disposed~~  
5 ~~about a first longitudinal axis in consecutive~~ loops therealong  
6 having one of a rounded and a ball end, said wire loops and ~~said~~

7 ~~first longitudinal axis~~ being further wound to form secondary loops  
8 ~~therealong disposed about a second axis~~ wherein ~~said first axis is~~  
9 ~~disposed in consecutive loops along said second axis~~ and having an  
10 outer diameter matching said nominal opening size, wherein  
11 ~~said wire comprising a memory for~~ secondary hoop  
12 ~~disposition about said second axis~~ outer diameter is greater  
13 than a vessel target site aperture and sized to urge said  
14 aperture to said nominal opening size.

1 10.(presently amended) The vessel support system of claim 9,  
2 further including  
3 a delivery means for constraining said secondary ~~performed~~  
4 loop ~~second axis~~ into a substantially linear configuration.

1 11.(previously presented) The vessel support system of claim 9,  
2 wherein said wire comprises a multi-filar wire.

1 12.(presently amended) The vessel support system of claim 9,  
2 further comprising non-uniform spacing ~~along said second axis~~.

1 13.(previously added) The vessel support system of claim 12,  
2 wherein said non-uniform spacing is configured to provide and  
3 aperture of sufficient size to permit fluid flow to a vessel side  
4 branch.

1 14.(cancelled) The procedure of claim 5, wherein said step of

2 providing a preformed hoop includes the steps of:  
3 determining an artery structure,  
4 preforming said hoop to match said structure, and  
5 instilling memory into said preformed hoop.

1 15.(presently amended) The procedure of claim 5 [[14]], wherein  
2 said step of providing a preformed hoop includes the step of  
3 providing an open space of sufficient size to permit fluid flow  
4 into an artery side branch.

1 16.(previously presented) The procedure of claim 15, further  
2 including the step of orienting said open space within said artery  
3 to align said open space with said artery side branch.

1 17.(presently amended) The expandable hoop support of claim 1,  
2 wherein said preformed hoop is formed to comprise different spaces  
3 ~~along said second axis.~~

1 18.(previously presented) The expandable hoop support of claim  
2 17, wherein said secondary ~~preformed~~ loop is formed to have an open  
3 space therealong of a size sufficient to allow fluid to flow to a  
4 tube side branch, and being wider than said secondary loop adjacent  
5 ~~spacing along said second axis.~~